

ABSTRACT

A conductive wire held between a first magnetic core of a soft magnetic film and a second magnetic core, the area of the cross-section, perpendicular to a magnetic path, of which is made partially smaller constitutes a magnetic detection device, and a DC current for generating a DC bias magnetic field and a high-frequency carrier signal are let to flow through the conductive wire. The DC current is selected so that the portion at which the cross-sectional area of the above-mentioned second magnetic core is made smaller has an appropriate DC bias magnetic field intensity. When this magnetic detection device is placed in an external magnetic field, the intensity of the DC bias magnetic field changes depending on the intensity of the external magnetic field; hence, the level of the carrier signal in the conductive wire changes. The change of the level of the carrier signal is output as the change of an electrical signal, whereby the intensity and direction of the magnetic field are detected.